

## عنوان مقاله:

A review on bioprinting of bone and skin tissues

## محل انتشار:

اولین کنگره بین المللی مهندسی بافت و پزشکی بازساختی ایران (سال: 1397)

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## خلاصه مقاله:

Tissue engineering has been considered as an effective method to help save lives and improve the quality of life. There are many methods to produce an appropriate scaffold that cells could seed on, like foam casting, freeze drying, electrospinning, phase separation, decellularizing and etc. Bioprinting is another technique which is considered as a new concept in tissue engineering. Bioprinting can be defined as the simultaneous printing of living cells and biomaterials like hydrogels, with a prescribed layer-by-layer stacking organization using a computer-aided transfer process for fabrication of bioengineered constructs. There is high potential to produce human engineered tissues like bone and skin that can be used in clinic via bioprinting and commercialize them. A myriad of tissue engineering approaches has been applied in skin tissue fabrication which resulted in introducing tissue substitutes such as autologous split-thickness skin graft, allografts, acellular dermal substitutes and cellularized graft-like commercial products, i.e., Dermagraft and Apligraf. Bio printing technology has been adopted for skin and bone tissue fabrication and it is hoped that other tissues could be produced by this technique

## کلمات کلیدی:

Tissue engineering, Skin, Bone, Bioprinting

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